

Name \_\_\_\_\_

# Meanings for Multiplication

PS 3-1

**U.S. Flags** The design of the U.S. flag has changed many times because of the growing number of states in the United States. The number of stars on the flag at particular dates in history is described in the exercises below.

1. George Washington's flag of 1775 had 3 rows of 3 stars and 2 rows of 2 stars. How many stars did the flag have altogether? \_\_\_\_\_

2. The U.S. flag of 1818 had 4 rows of 5 stars. How many stars did the flag have altogether? \_\_\_\_\_

3. The U.S. flag of 1865 had 3 rows of 8 stars and 2 rows of 6 stars. How many stars did the flag have altogether? \_\_\_\_\_

4. The U.S. flag of 1912 had 6 rows of 8 stars. How many stars did the flag have altogether? \_\_\_\_\_  
Draw an array for a flag that has the same number of stars but shows  $4 \times 12$ . \_\_\_\_\_

5. **Writing in Math** Write a multiplication and addition sentence you could use to show how 50 stars can be arranged to form an array on a flag. Explain why they are both correct.

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Name \_\_\_\_\_

## Patterns in Multiplying by 0, 1, 2, 5, and 9

PS 3-2

Vehicle	Number of Wheels
Motorcycle	2
Unicycle	1
Automobile	4
Tricycle	3
Tractor-trailer	18

1. How many wheels are there on 9 motorcycles? \_\_\_\_\_
2. How many wheels are there on 47 unicycles? \_\_\_\_\_
3. How many wheels are there on 5 automobiles? \_\_\_\_\_
4. How many wheels are there on 9 tricycles? \_\_\_\_\_
5. How many wheels are there on 2 tractor-trailers? \_\_\_\_\_
6. What property of multiplication helped you solve Exercise 2?  
\_\_\_\_\_  
\_\_\_\_\_
7. What property of multiplication helps you know that  $9 \times 2 = 2 \times 9$ ?  
\_\_\_\_\_  
\_\_\_\_\_
8. **Writing in Math** Explain how you know that in  $? \times 4,358 = 0$ , the ? will be 0.  
\_\_\_\_\_  
\_\_\_\_\_

**Key Idea**

Patterns can help you remember multiplication facts.

**Vocabulary**

- multiple
- Zero Property of Multiplication
- Identity Property of Multiplication
- Commutative Property of Multiplication

**Materials**

- hundred chart

**Think It Through**

I can **use patterns** to help me find the facts for 2, 5, 9.

# Patterns in Multiplying by 0, 1, 2, 5, and 9

**LEARN**

What are the patterns for multiples of 2, 5, and 9?

A **multiple** is the product of any two whole numbers.

**WARM UP**

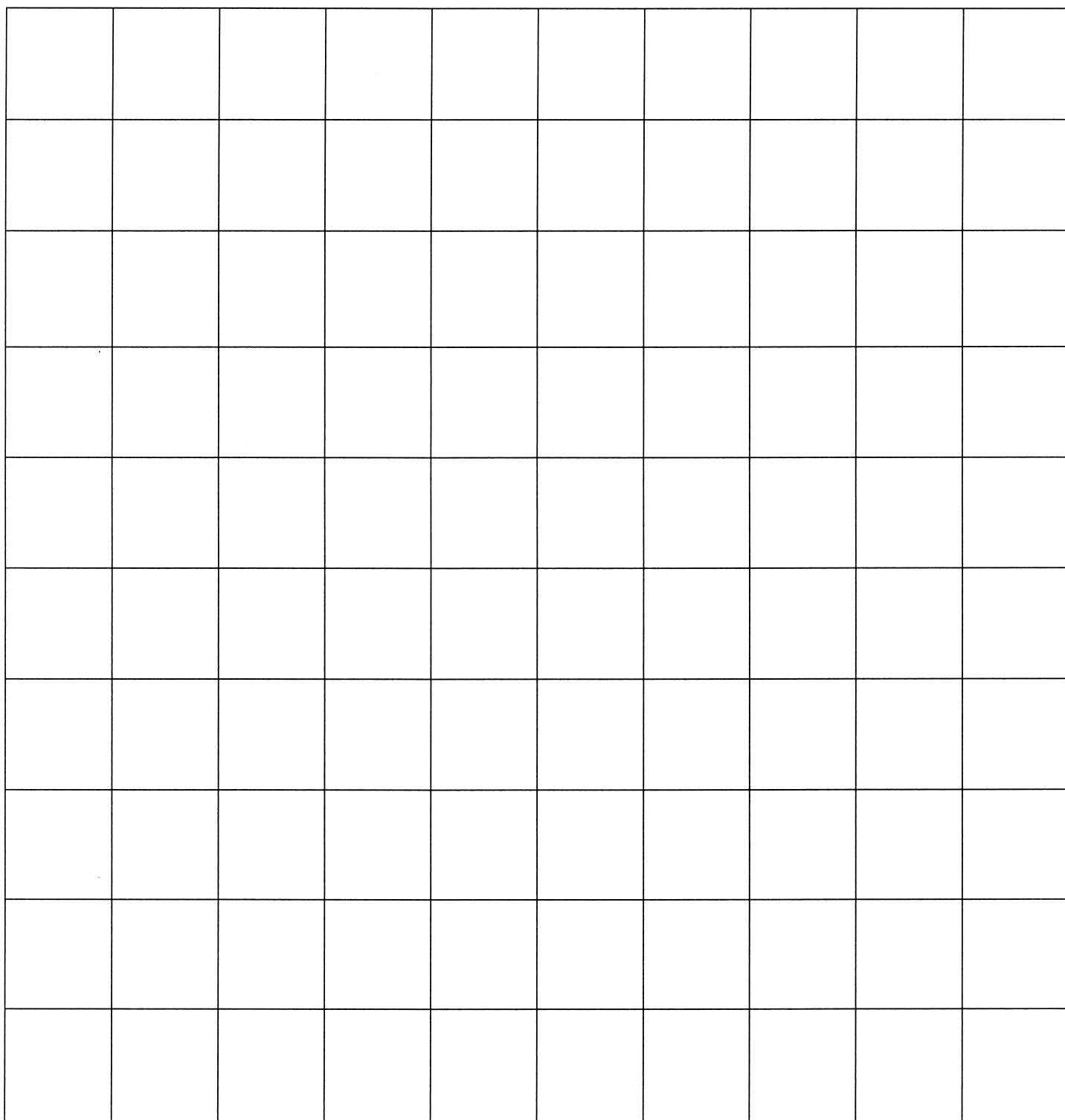
Find the pattern. Fill in the blanks.

- 2, 4, 6, , ,
- 5, 10, 15, , ,
- 9, 18, 27, , ,
- 10, 20, 30, , ,

**Activity**

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

- Copy and complete the hundred chart shown above.
- Many things come in pairs, such as socks and mittens. Skip count by 2s. Put a triangle around each multiple of 2. What pattern do you see in the multiples of 2?
- Skip count by 5s. Put a square around each multiple of 5. What pattern do you see in the multiples of 5?
- Skip count by 9s. Put a circle around each multiple of 9. What pattern do you see in the multiples of 9?
- What patterns do you see for the numbers that have both triangles and squares?
- Explain how you know that 73 is not a multiple of 5.
- Explain how you know that 89 is not a multiple of 9.





Name \_\_\_\_\_

# Using Known Facts to Find Unknown Facts

P 3-3

Use breaking apart to find each product.

1. 
$$\begin{array}{r} 7 \\ \times 3 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 9 \\ \times 5 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 8 \\ \times 2 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 6 \\ \times 4 \\ \hline \end{array}$$

5.  $4 \times 3 =$  \_\_\_\_\_

6.  $9 \times 3 =$  \_\_\_\_\_

7.  $8 \times 5 =$  \_\_\_\_\_

8.  $3 \times 6 =$  \_\_\_\_\_

9.  $6 \times 7 =$  \_\_\_\_\_

10.  $7 \times 9 =$  \_\_\_\_\_

11. **Number Sense** Sara traced circle stencils for her project. She needs 7 rows of 9 circle stencils. She thought that 7 rows of 9 is the same as 3 rows of 9 and 2 rows of 9. Is this correct?

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**Reasoning** Compare. Use  $<$ ,  $>$ , or  $=$  to fill in each blank  $\bigcirc$ .

12.  $6 \times 9 \bigcirc 9 \times 6$

13.  $9 \times 4 \bigcirc 6 \times 6$

14.  $8 \times 8 \bigcirc 7 \times 9$

## Test Prep

15. Which of the following is equal to the product of  $3 \times 3$ ?

A.  $9 \times 1$

B.  $3 \times 1$

C.  $4 \times 2$

D.  $6 \times 3$

16. **Writing in Math** Explain how the three multiplication sentences are related.

$12 \times 2$

$8 \times 3$

$6 \times 4$

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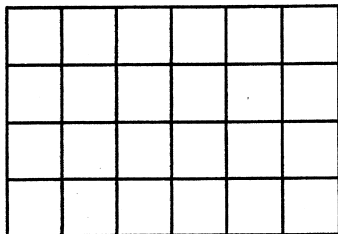
Name \_\_\_\_\_

# How Does Your Garden Grow?

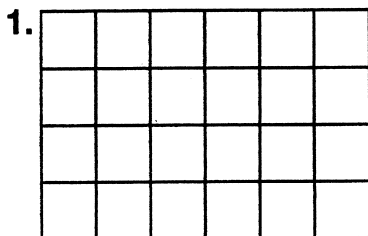
**E 3-3**  
**REASONING**

Area is the name for the number of square units that are in a given space. You can figure out the area of a rectangle as you would an array. You can also break apart a rectangle to form different combinations and still have the same area.

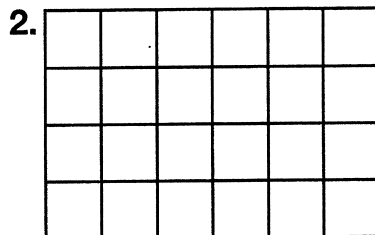
Here is Mary's garden:  $4 \times 6 = 24$  square units.



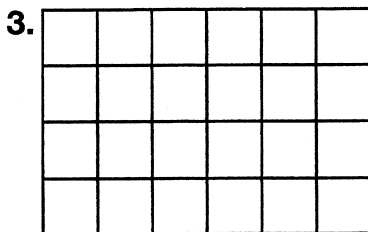
Draw lines and write the first letter of the flower to show several possible planting plans.



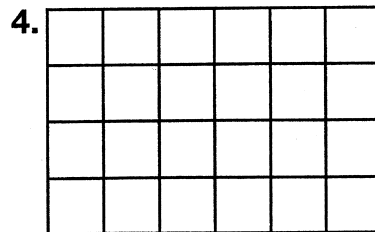
$2 \times 6 =$  tulips  
 $2 \times 4 =$  roses  
 $2 \times 2 =$  marigolds



$4 \times 4 =$  tulips  
 $2 \times 2 =$  roses  
 $2 \times 2 =$  marigolds



$3 \times 4 =$  tulips  
 $1 \times 6 =$  roses  
 $3 \times 2 =$  marigolds



$4 \times 5 =$  tulips  
 $1 \times 3 =$  roses  
 $1 \times 1 =$  marigolds

Name \_\_\_\_\_

## Multiplying by 10, 11, and 12

P 3-4

1.  $4 \times 10 =$  \_\_\_\_\_ 2.  $12 \times 2 =$  \_\_\_\_\_ 3.  $10 \times 6 =$  \_\_\_\_\_  
4.  $11 \times 1 =$  \_\_\_\_\_ 5.  $4 \times 12 =$  \_\_\_\_\_ 6.  $8 \times 11 =$  \_\_\_\_\_  
7.  $9 \times 10 =$  \_\_\_\_\_ 8.  $12 \times 3 =$  \_\_\_\_\_ 9.  $10 \times 7 =$  \_\_\_\_\_  
10.  $11 \times 5 =$  \_\_\_\_\_ 11.  $10 \times 5 =$  \_\_\_\_\_ 12.  $6 \times 12 =$  \_\_\_\_\_

13. **Number Sense** Beatrice multiplied  $10 \times 9$ . She quickly found the answer by placing a 0 behind the 9 to get an answer of 90. Is this reasonable?

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There are 12 months in 1 year. How many months are in

14. 2 years? \_\_\_\_\_  
15. 3 years? \_\_\_\_\_  
16. 5 years? \_\_\_\_\_

17. In the classroom there are 5 round tables. There are 4 students sitting at each table. How many students are sitting at the tables altogether? \_\_\_\_\_

### Test Prep

18. How much money is 12 dimes?  
A. \$0.60      B. \$1.00      C. \$1.20      D. \$2.00
19. **Writing in Math** Explain how to find  $7 \times 11$ .

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Name \_\_\_\_\_

# Recycling Numbers

**E 3-5**  
**DATA**

Miles and Cynthia participated in a weeklong recycling project. Cynthia collected 4 cans every day, and Miles collected 3 cans every day.

1. Fill in the table to show how many cans each student has collected by the end of each day.

Days	1	2	3	4	5	6	7
Miles	3	6					
Cynthia	4	8					

2. At the end of the week, how many cans did Cynthia collect?

\_\_\_\_\_

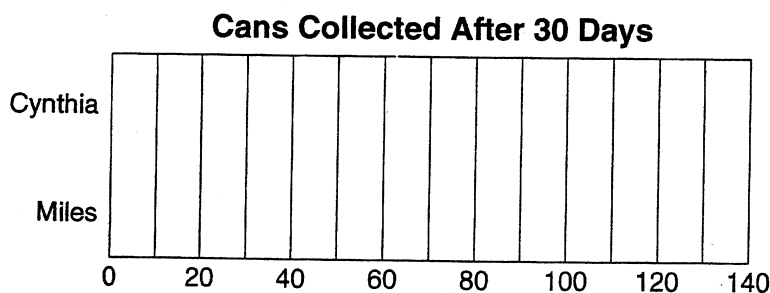
3. At the end of the week, how many cans did Miles collect?

\_\_\_\_\_

4. If the pattern had continued for another week, a total of 14 days, how many cans would Cynthia have collected? How many would Miles have collected?

\_\_\_\_\_

5. The project was such a success, it was continued for 30 days. Complete the bar graph to compare the total cans collected by Miles and Cynthia.



Name \_\_\_\_\_

## Meanings for Division

P 3-6

Draw pictures to solve each problem.

1. There are 12 small gift bags. Each bag can hold 1 toy and some stickers. There are 36 stickers. If an equal number of stickers is put in each bag, how many stickers will be in each bag?

\_\_\_\_\_

2. One egg carton holds 12 eggs. How many cartons are you able to fill with 60 eggs?

\_\_\_\_\_

3. There are 21 students in Mr. Tentler's class. The students divided themselves evenly into 3 groups. How many students are in each group?

\_\_\_\_\_

### Test Prep

4. Calvin read an 18-page chapter in his social studies book in 2 hours. If he read the same number of pages each hour, how many pages did he read per hour?

A. 3 pages      B. 6 pages      C. 9 pages      D. 12 pages

5. **Writing in Math** The class is planning a party. The pizza restaurant cuts each pizza into 8 slices. There are 32 students. How many pizzas does the class need to order for each student to have a slice? Explain.

\_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

# Baby-Sitting in the Neighborhood

**E 3-6**  
**DECISION MAKING**

Jennifer baby-sits for some of the families in her neighborhood. She wants to decide how she can earn the most money. She has made a chart that shows how long she usually baby-sits for a family and how much she is paid for her job.

Family	Hours	Amount Paid
Roberts	6	\$30
Robinsons	6	\$24
San Giacomos	8	\$40
Lings	5	\$35
Oberlins	7	\$42

1. Which family pays the most per hour? What is the hourly rate?

\_\_\_\_\_

2. Which family pays the least per hour?

\_\_\_\_\_

3. Which would pay more, 8 hr of baby-sitting for the Oberlins or 7 hr of baby-sitting for the San Giacomos?

\_\_\_\_\_

\_\_\_\_\_

4. On one Friday night, Jennifer is asked to baby-sit for two different families. The Robinsons need her for 5 hr, and the Lings want her to baby-sit for 4 hr. If Jennifer can only take one job and wants to make the most money, which job should she take? How much will she earn?

\_\_\_\_\_

5. On a different Friday night, the Roberts offer Jennifer a 5-hour baby-sitting job with a \$4 tip, and the Robinsons offer Jennifer an 8-hour baby-sitting job. Which job should Jennifer take? How much more will she earn?

\_\_\_\_\_

Name \_\_\_\_\_

# Relating Multiplication and Division

R 3-7

Multiplication and division are related, just like addition and subtraction are related.

This is the fact family for 5, 6, and 30:

$$5 \times 6 = 30$$

$$30 \div 6 = 5$$

$$6 \times 5 = 30$$

$$30 \div 5 = 6$$

Complete each fact family.

1.  $2 \times \underline{\hspace{2cm}} = 10$

$$10 \div 5 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = 10$$

$$10 \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

2.  $9 \times \underline{\hspace{2cm}} = 27$

$$27 \div 3 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = 27$$

$$27 \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

3.  $8 \times \underline{\hspace{2cm}} = 72$

$$72 \div 8 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = 72$$

$$72 \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

4.  $6 \times \underline{\hspace{2cm}} = 48$

$$48 \div 8 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = 48$$

$$48 \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Write a fact family for each set of numbers.

5. 7, 4, 28 \_\_\_\_\_

\_\_\_\_\_

6. 5, 8, 40 \_\_\_\_\_

\_\_\_\_\_

7. **Number Sense** What multiplication facts are part of the fact family for  $12 \div 3 = 4$ ?

\_\_\_\_\_

Name \_\_\_\_\_

## Division Facts

P 3-8

1.  $9 \div 3 =$  \_\_\_\_\_

2.  $21 \div 7 =$  \_\_\_\_\_

3.  $30 \div 5 =$  \_\_\_\_\_

4.  $56 \div 8 =$  \_\_\_\_\_

5.  $72 \div 9 =$  \_\_\_\_\_

6.  $48 \div 8 =$  \_\_\_\_\_

7.  $9 \overline{)81}$  \_\_\_\_\_

8.  $6 \overline{)54}$  \_\_\_\_\_

9.  $7 \overline{)49}$  \_\_\_\_\_

10.  $3 \overline{)27}$  \_\_\_\_\_

11. **Reasoning** If  $44 \div 4 = 11$ , what is  $44 \div 11$ ? Explain.

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12. Taylor bought a CD for \$10. How many CDs can she buy for \$40?

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13. Christian placed an order with the book club. He purchased 2 books for \$3 each and a stamp-making kit that costs \$5. What was his total?

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### Test Prep

14. Which is the quotient of  $48 \div 6$ ?

A. 8

B. 6

C. 4

D. 9

15. **Writing in Math** If  $9 \times 8 = 72$ , then 72 divided by 8 is what number? Explain how you know without actually finding the quotient.

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Name \_\_\_\_\_

# Special Quotients

R 3-9

There are special rules for dividing numbers by 1 and by 0.

Rule: A number divided by 1 is that number.

Examples:  $4 \div 1 = 4$

$55 \div 1 = 55$

Rule: A number divided by itself (except 0) is 1.

Examples:  $17 \div 17 = 1$

$135 \div 135 = 1$

Rule: Zero divided by a number (except 0) is 0.

Examples:  $0 \div 4 = 0$

$0 \div 15 = 0$

Rule: You cannot divide a number by zero.

Examples:  $7 \div 0$  cannot be done.

$12 \div 0$  cannot be done.

1.  $0 \div 2 =$  \_\_\_\_\_

2.  $4 \div 4 =$  \_\_\_\_\_

3.  $7 \overline{)0}$  \_\_\_\_\_

4.  $9 \overline{)9}$  \_\_\_\_\_

5.  $0 \div 3 =$  \_\_\_\_\_

6.  $10 \overline{)10}$  \_\_\_\_\_

7.  $11 \overline{)0}$  \_\_\_\_\_

8.  $11 \div 1 =$  \_\_\_\_\_

Compare. Use  $>$ ,  $<$ , or  $=$  for each  $\bigcirc$ .

9.  $6 \div 6 \bigcirc 3 \div 3$

10.  $7 \div 1 \bigcirc 8 \div 8$

11.  $0 \div 5 \bigcirc 3 \div 1$

12.  $0 \div 4 \bigcirc 0 \div 9$

13.  $5 \div 5 \bigcirc 0 \div 5$

14.  $7 \div 7 \bigcirc 9 \div 9$

15.  $8 \div 1 \bigcirc 0 \div 8$

16.  $9 \div 9 \bigcirc 9 \div 1$

17.  $0 \div 12 \bigcirc 12 \div 1$

18.  $0 \div 11 \bigcirc 0 \div 15$

19. **Number Sense** If  $a \div b = 0$ , what do you know about  $a$ ? \_\_\_\_\_

Name \_\_\_\_\_

# Special Quotients

P 3-9

1.  $0 \div 10 =$  \_\_\_\_\_ 2.  $7 \div 1 =$  \_\_\_\_\_ 3.  $8 \div 8 =$  \_\_\_\_\_

4.  $9 \div 9 =$  \_\_\_\_\_ 5.  $0 \div 5 =$  \_\_\_\_\_ 6.  $5 \div 1 =$  \_\_\_\_\_

7.  $1\overline{)4}$  \_\_\_\_\_ 8.  $8\overline{)0}$  \_\_\_\_\_ 9.  $3\overline{)3}$  \_\_\_\_\_ 10.  $1\overline{)6}$  \_\_\_\_\_

11. **Number Sense** If  $x \div 9 = 1$ , how do you know what  $x$  is? Explain.

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12. Kenneth has 22 math problems to do for homework. He has 12 problems done. How many more problems does he have left? If he completes 1 problem every minute, how many more minutes does he have to work?

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13. There are 8 people who would like to share a box of granola bars that contains 8 bars. How many granola bars does each person get if they share equally?

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## Test Prep

14. Which is the quotient of  $20 \div 20$ ?

A. 20

B. 2

C. 1

D. 0

15. **Writing in Math** Write a rule for the following number sentence:  $0 \div 7 = 0$ .

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Name \_\_\_\_\_

# Multiplication and Division Stories

PS 3-10

**Humane Societies** Humane societies take care of homeless animals.

**Humane Society**

Animal/Item	Number
Dogs	6
Cats	8
Cages	4
Kennels	3

Use the information in the chart to write and solve a story problem for

1.  $6 \div 3$ . \_\_\_\_\_

\_\_\_\_\_

2.  $4 \times 2$ . \_\_\_\_\_

\_\_\_\_\_

3.  $6 \times 1$ . \_\_\_\_\_

\_\_\_\_\_

4. **Writing in Math** A checkerboard or chessboard has 64 squares. Write a multiplication or division story regarding the board.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Name \_\_\_\_\_

**PROBLEM-SOLVING SKILL**

**P 3-11**

# Multiple-Step Problems

Write and answer the hidden question or questions.  
Then solve the problem. Write your answer in a  
complete sentence.

1. Mario and his family went to the county fair. They bought 2 adult passes and 3 children's passes. What was the total cost for the family?

County Fair Admission	
Adults	\$5.00
Students	\$3.00
Children	\$2.00

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2. A bus has 12 rows with 1 seat in each row on one side and 12 rows with 2 seats in each row on the other side. How many seats does the bus have altogether?

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3. **Writing in Math** Write a problem about going to the laundromat that has a hidden question. A single load of laundry costs \$2 and a double load costs \$4. Solve your problem.

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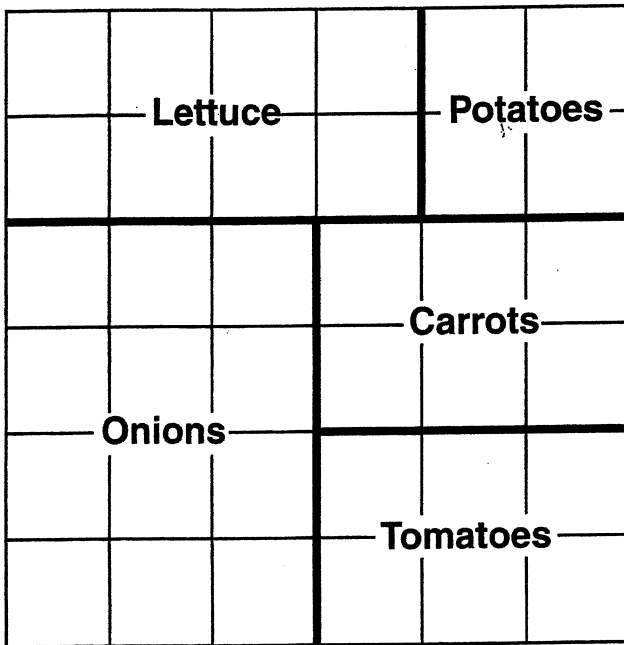
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Name \_\_\_\_\_

# Graphing Sales

**E 3-11**  
**REASONING**

Fran grows vegetables in her garden, and then she sells them at the market. A diagram of Fran's vegetable patch and a price list for her vegetables are shown below.



Fran's Fresh Produce		
Carrots	2 lb	\$1
Onions	3 lb	\$2
Tomatoes	3 lb	\$5
Potatoes	2 lb	\$3
Lettuce	1 lb	\$2

1. How many squares are in Fran's garden?

\_\_\_\_\_

2. Each square in Fran's garden yields 2 lb of vegetables. If Fran plants every square in her garden, how many pounds of vegetables will she be able to grow?

\_\_\_\_\_

3. Fran makes \$18 selling onions at the market. How many pounds of onions did she sell?

\_\_\_\_\_

4. A customer buys 6 lb of tomatoes, 4 lb of potatoes, and 4 lb of carrots. He pays with a \$50 bill. How much change should he get back?

\_\_\_\_\_

Name \_\_\_\_\_

# Writing and Evaluating Expressions

P 3-12

Evaluate each expression for  $b = 6$ .

1.  $6b =$  \_\_\_\_\_ 2.  $\frac{42}{b} =$  \_\_\_\_\_ 3.  $5b =$  \_\_\_\_\_ 4.  $\frac{b}{3} =$  \_\_\_\_\_

Evaluate each expression for  $c = 4$ .

5.  $\frac{c}{2} =$  \_\_\_\_\_ 6.  $12c$  \_\_\_\_\_ 7.  $8c$  \_\_\_\_\_ 8.  $\frac{16}{c} =$  \_\_\_\_\_

Evaluate each expression.

9.  $(84 \div z) - 6$  for  $z = 7$  \_\_\_\_\_ 10.  $(48 \div h) \times 2$  for  $h = 8$  \_\_\_\_\_

Draw a picture that shows the main idea. Then write and evaluate an expression to solve the problem.

11. Diedre helps read to the kindergarten class. She is assigned to  $q$  students. She reads for 10 min with each student. Write an expression to represent the total number of minutes Diedre reads with kindergarten students. Evaluate the expression for  $q = 5$ .

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## Test Prep

12. Solve.

$$24 \div n = 12$$

- A.  $n = 5$       B.  $n = 4$       C.  $n = 3$       D.  $n = 2$

13. **Writing in Math** Keith wrote the expression  $10d$  to represent the number of dimes in  $d$  dollars. Is Keith's expression correct? Explain.

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Name \_\_\_\_\_

# Find a Rule

P 3-13

Complete each table. Write the rule.

1.

In	7	6	5	4	3	$n$
Out	21	18	15	12		

\_\_\_\_\_

2.

In	5	10	15	20	25	$n$
Out	1	2	3	4		

\_\_\_\_\_

In one week, Lyle read 40 pages in his book and his dad gave him 5 stickers. The next week, Lyle read 16 pages and his dad gave him 2 stickers. The third week, Lyle read 56 pages and his dad gave him 7 stickers.

Pages	40	16	56	
Stickers	5	2	7	4

3. Complete the table to show how many pages Lyle had to read to receive 4 stickers from his dad.

\_\_\_\_\_

4. Write a rule for the table.

\_\_\_\_\_

## Test Prep

5. What is the rule for the table at the right?

In	2	4	6	8	10
Out	14	28	42	56	70

- A. Divide by 7    B. Multiply by 7    C. Divide by 8    D. Multiply by 8

6. **Writing in Math** Complete the table to represent the pattern in figures. Write a rule.

Figure	1	2	3
Circles			



Figure 1



Figure 2

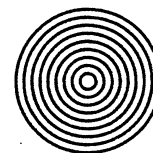


Figure 3

\_\_\_\_\_

Name \_\_\_\_\_

# Divide and Conquer

**E 3-8**  
**ALGEBRA**

Find the unknown value in the multiplication fact to help you complete the division fact. Write out both completed facts.

1.  $6 \times m = 36$      $\frac{36}{6} = m$

\_\_\_\_\_

2.  $4 \times y = 28$      $\frac{28}{y} = 4$

\_\_\_\_\_

3.  $z \times 8 = 16$      $\frac{16}{8} = z$

\_\_\_\_\_

4.  $7 \times 8 = q$      $\frac{q}{8} = 7$

\_\_\_\_\_

5.  $9 \times r = 54$      $\frac{54}{r} = 9$

\_\_\_\_\_

6.  $10 \times s = 10$      $\frac{10}{10} = s$

\_\_\_\_\_

7. In a soccer match, each team has 11 players. If 24 people are willing to play a game of soccer, are there enough players for two full teams? Write a multiplication and division sentence to show your answer.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_



Name \_\_\_\_\_

**PROBLEM-SOLVING APPLICATIONS**

**P 3-15**

# Dr. Seuss' Books

Dr. Seuss was one of America's most famous authors and illustrators of childrens' books. His real name was Theodore Geisel. Geisel was born in 1904 in Springfield, Massachusetts. Geisel's first job was drawing cartoon advertisements for a company that made bug spray. Many of the cartoon characters Geisel drew for that job turned into the characters he used in his books.

1. Each Dr. Seuss hardcover book costs about \$9.  
How much would you pay if you bought 5 books? \_\_\_\_\_
2. Oscar found a special sale on Dr. Seuss books.  
Each book cost the same price. He paid \$36 for  
6 books. How much did he pay for each book? \_\_\_\_\_

Mrs. Melvin, a librarian, found a special on-line offer for Dr. Seuss books. Each book cost \$2.

3. How much did Mrs. Melvin pay for 6 books? \_\_\_\_\_
4. If Mrs. Melvin paid \$20 for  $n$  books, how many  
books did she order? \_\_\_\_\_

One of Dr. Seuss' most famous books is called *The Foot Book*.

5. There are 27 pages in this book. There are about  
27 drawings. On the average, about how many  
drawings are on each page?  
\_\_\_\_\_
6. A close study of this book shows that on 6 pages the  
word *feet* appears 2 times. What is the total number  
of times the word appears on those 6 pages? \_\_\_\_\_
7. On every 9th page of this book, the word *feet* appears  
3 times. Since there are 27 pages in the book, how  
many pages have the word *feet* written 3 times? \_\_\_\_\_

Name: \_\_\_\_\_

## Chapter 3 A Review

1. Write the addition number sentence shown in the picture group?

XXXXX XXXXX	XXXXX XXXXX	XXXXX XXXXX
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2. Write the multiplication number sentence shown in the picture group?

XXXXX	XXXXX	XXXXX
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3. Draw an array that shows  $3 \times 4$ ?

4. Write a number sentence equal to  $2 + 2 + 2 + 2 + 2 = 10$ .

5. Express this number fact as repeated addition.

$$6 \times 5 = 30$$

a.  $6 + 6 + 6 + 6 + 6 + 6 = 30$

b.  $10 + 10 + 10 = 30$

c.  $3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 = 30$

d.  $5 + 5 + 5 + 5 + 5 + 5 = 30$

6. Which number sentence is correct?

- a.  $(3 \times 8) \times 1 = 23$
- b.  $(3 \times 8) \times 0 = 24$
- c.  $(8 \times 3) \times 2 = 48$
- d.  $(8 \times 3) \times 1 = 0$

7. What are the factors of  $12 \times 1 = ?$  \_\_\_\_\_

Find the product.

- |                    |                    |
|--------------------|--------------------|
| 1. $3 \times 8 =$  | 6. $5 \times 5 =$  |
| 2. $4 \times 9 =$  | 7. $9 \times 9 =$  |
| 3. $7 \times 8 =$  | 8. $3 \times 3 =$  |
| 4. $2 \times 0 =$  | 9. $12 \times 3 =$ |
| 5. $1 \times 10 =$ | 10. $8 \times 9 =$ |

Use the distributive property to solve.

- |                    |                     |
|--------------------|---------------------|
| 1. $11 \times 8 =$ | 5. $9 \times 7 =$   |
| 2. $12 \times 4 =$ | 6. $12 \times 12 =$ |
| 3. $5 \times 9 =$  | 7. $12 \times 9 =$  |
| 4. $8 \times 8 =$  | 8. $7 \times 6 =$   |

**Get out Multiplication flash cards and practice with partner!!!**

## Chapter 3 Part B Review

Name: \_\_\_\_\_

1. Draw 16 circles split up into 8 parts.

2. Draw 10 triangles split into 2 parts

3. Write the fact family for 2, 6, 12

4. Write the fact family for 5, 8, 40

5. Write the fact family for 5, 5, 25

6. What Multiplication problem can be used to solve this problem?

$$49 \div 7 =$$

7. What Multiplication problem can be used to solve this problem?

$$56 \div 8 =$$

8. What Multiplication problem can be used to solve this problem?

$$10 \div 1 =$$



9. What Multiplication problem can be used to solve this problem?

$$0 \div 7 =$$

10. Solve the problem and label the **quotient**, **divisor**, and **dividend** in each problem

11.  $4 \overline{)8}$

12.  $3 \overline{)9}$

13.  $24 \div 8 =$

14. What is the quotient of  $5 \div 0 =$

15. What is the quotient of  $4 \div 1 =$

16. What is the quotient of  $0 \div 3 =$

17. What is the quotient of  $35 \div 7 =$

18. What is the quotient of  $2 \div 2 =$

19. What is the quotient of  $64 \div 1 =$

20. What is the quotient of  $9 \div 9 =$

21. What is the quotient of  $7 \div 0 =$

**Write a story problem for the following problems.**

1.  $3 \times 9 =$

2.  $25 \div 5 =$

Name: \_\_\_\_\_

## Ch 3C Review

### Evaluate each expression

1.  $4m$  for  $m = 9$

6.  $24 \div (n - 2)$  for  $n = 8$

2.  $k \div 3$  for  $k = 12$

7.  $6b$  for  $b = 8$

3.  $h \times 4$  for  $h = 3$

8.  $j \div 8$  for  $j = 32$

4.  $10 \div s$  for  $s = 5$

9.  $5f + 2f$  for  $f = 4$

5.  $(y - 9) \times 3$  for  $y = 15$

10.  $9 \times w$  for  $w = 7$

### Complete each table and write the rule.

1. Rule =  $r \times 3$

<b>In</b>	3	5	6	8	9
<b>Out</b>	9				

2. Rule =  $r \div 5$

<b>In</b>	5	20	30	35	45
<b>Out</b>	1				

3. When Multiplication is the rule is the **IN** or **OUT** number largerer?

4. Write the rule

Rule =

<b>In</b>	4	6	8	9	7
<b>Out</b>	28		56		

**Solve each equation by testing these values.  $M = 2, 3, 5, 6$**

1.  $2m = 6$

3.  $9m = 45$

2.  $30 \div m = 10$

4.  $4m = 24$

**Solve each equation by testing these values.  $N = 4, 6, 12, 24, 30$**

1.  $n \div 3 = 8$

3.  $42 \div n = 7$

2.  $n \div 3 = 10$

4.  $2n = 24$

**Write a story problem for the following number sentences**

1. Write a story problem for  $3 \times 8$ .

2. Write a story problem for  $12 \div 4$ .

Name \_\_\_\_\_

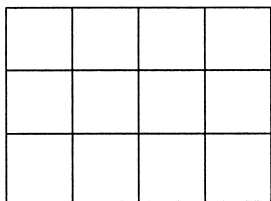
**Ch 3 Perf. Assess.**

1. There is 2 pieces of cheese on a cheeseburger at McDonald's. How many pieces of cheese will McDonald's need for 6 cheeseburgers. Make a table to solve this problem.

2. Each puppy had 2 bowls. One for food and one for water. If a person had 5 puppies. How many bowls do they have? Make a table to solve this problem.

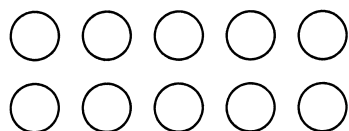
3. It costs \$2.00 to go to the Ebenezer Basketball game. How much will it cost to take 4 people. Make a table to solve this problem.

4. Use the tile picture to write a multiplication story for  $4 \times 3 = 12$





5. Use the picture to write a multiplication story for  $2 \times 5 = 10$



1. How many more tires does a car have than a motorcycle? Solve the problem. Show all your work and answer the question in a sentence.

Car = 4 tires

Motorcycle = 2 tires

2. How many more tires does 4 cars have than 4 motorcycles? Solve the problem. Show all your work and answer the question in a sentence.

Car = 4 tires

Motorcycle = 2 tires

**Complete the table by writing in the missing numbers.**

2	3		5	6		8
8		16	20		28	32

Rule =

**Complete the table by writing in the missing numbers.**

5	15			20	10	25
1		8	9	4		5

Rule =